

# Notice of Allowability

Application No.

10/045,948

Examiner

Daniel S. Metzmaier

Applicant(s)

ZEMANIAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 9/12/05 and the interview of 9/21/05.
2. ☒ The allowed claim(s) is/are 6,10 and 21-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 9/21/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**EXAMINER'S AMENDMENT**

Claims 6, 10 and 21-31 are allowed.

***Terminal Disclaimer***

1. The terminal disclaimer filed on July 7, 2003 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of 6,531,224 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Examiner's amendment***

2. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment, which places this application in condition for allowance. During a telephone conversation conducted on September 21, 2005, Douglas E. McKinley, Jr. requested an extension of time for one MONTH(S) and authorized the Director to charge Deposit Account No. 502,149 the required fee of \$60 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Replace all previous versions of the claim listings with the list beginning on page 3 of this Action.

***Amendment to the claims***

**Claims**

1-5) (cancelled).

6) (Currently amended) A composition of matter comprising an aerogel having pore sizes of between 150 Å and 250 Å and bottlenecks of between 110 Å and 150 Å said aerogel further having a monolayer coating, wherein a monolayer coating is an organized single layer of molecules, formed by the aggregation of component monomers which have an affinity for both each other and a surface of the aerogel.

7-9) (Cancelled).

10) (Currently amended) A composition of matter comprising a ceramic oxide aerogel having pore sizes of between 150 Å and 250 Å and bottlenecks of between 110 Å and 150 Å said ceramic oxide aerogel further having a monolayer coating consisting essentially of a self-limiting monomer, wherein a monolayer coating is an organized single layer of molecules, formed by the aggregation of component monomers which have an affinity for both each other and a surface of the aerogel.

11-20) (Cancelled).

21) (Original) A method for forming an aerogel having a monolayer coating comprising the steps of:

- a. hydroetching an aerogel to provide a hydroetched aerogel,
- b. providing said hydroetched aerogel with a monolayer forming precursor in a supercritical fluid,

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- c. reacting said hydroetched aerogel and said monolayer forming precursor in said supercritical fluid to form a covalent bond between said hydroetched aerogel and said monolayer forming precursor.
- 22) (Original) The method of claim 21, wherein said aerogel is provided as a ceramic oxide.
- 23) (Original) The method of claim 21, wherein said ceramic oxide is provided as selected from the group consisting of silica, alumina, aluminosilicate, and combinations thereof.
- 24) (Original) The method of claim 21, wherein said monolayer forming precursor is provided as self-limiting monomers.
- 25) (Original) The method of claim 24, wherein said self-limiting monomers are provided as selected from the group consisting of alkyl silanes, chlorosilanes, boranes, chloroboranes, germanes, and combinations thereof.
- 26) (New) The composition of matter of claim 6, wherein said aerogel is a ceramic oxide.
- 27) (New) The composition of matter of claim 6, wherein said ceramic oxide is selected from the group consisting of silica, alumina, aluminosilicate, and combinations thereof.
- 28) (New) The composition of matter of claim 6, wherein said monolayer coating is formed of self-limiting monomers.

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29) (New) The composition of matter of claim 6, wherein said self-limiting monomers are selected from the group consisting of alkyl silanes, chlorosilanes, boranes, chloroboranes, germanes, and combinations thereof.

30) (New) The composition of matter of claim 10, wherein said ceramic oxide is selected from the group consisting of silica, alumina, aluminosilicate, and combinations thereof.

31) (New) The composition of matter of claim 10, wherein said self-limiting monomer is selected from the group consisting of alkyl silanes, chlorosilanes, boranes, chloroboranes, germanes, and combinations thereof.

*End of claim list*

***Reasons for allowance***

3. The following is an examiner's statement of reasons for allowance: the amendments to claims 6 and 10 have basis at page 3, lines 12-14, of the instant specification. Said amendments more clearly define the invention. Attention is also directed to paragraphs 6 and 8 of the Office Action mailed September 11, 2003 and paragraphs 7 and 8 of the Office Action mailed June 16, 2005 and Oct. 14, 2004.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1712

DSM